

12.10.2001

LE/P dö sche

File: V5310

Patent claims

1. Data card unit with means for automatically transporting data cards between an insertion/
5 removal position and a reading/writing position, a carrier provided with a guide assigned to the data cards being provided, a motor-actuated transporting shaft reaching into the movement space of the data cards and means by which an insertion opening of
10 the data card unit can be closed being provided, characterized in that a two-armed rocker (13) which can be pivoted about an axis arranged transversely in relation to the directions of movement of the data cards (68) is provided, one arm of which
15 rocker has a closing element (57) and the other arm of which has at least one sensing element (66, 67), in that the distance between the closing element (57) and the sensing element (66, 67) is equal to or greater than the length of a data card (68), in
20 that surfaces (69, 70) sloping toward the plane of movement of the data cards (68) are formed in a v-shaped manner at least on the closing element (57) in such a way that, when a data card (68) is inserted/ejected, a pivoting of the rocker (13)
25 takes place and that, when a data card (68) is located in the reading/writing position, the data card (68) reaches into the pivoting area of the sensing element (66, 67) in such a way that the rocker (13) is arrested in the closed position.
30
2. Data card unit according to claim 1, characterized in that the rocker (13) is mounted on the transporting shaft (42) provided with at least one friction element (43, 44, 45).
35
3. Data card unit according to claim 1, characterized in that the rocker (13) is formed with arms of

unequal length, the closing element (57) being provided on the longer arm of the rocker (13).

4. Data card unit according to claim 1, characterized
5 in that at least the sensing element (66, 67) is formed directly on the rocker (13).
5. Data card unit according to claim 1, characterized
10 in that clearances (28, 29) for the sensing element (66, 67) and the closing element (57) to pass through the movement space of the data cards (68) are formed in the carrier (2).
6. Data card unit according to claim 1, characterized
15 in that the length of the closing element (57) is greater than the width of the guide assigned to the data cards (68) in the carrier (2) and in that a groove (56) corresponding to the cross section and the length of the closing element (57) is formed in
20 the carrier (2).
7. Data card unit according to claim 6, characterized
25 in that the groove (56) is lined with an elastomeric material.
8. Data card unit according to claim 1, characterized
30 in that a bridge (14) which can be connected to the carrier (2) and reaches over the rocker (13) is provided and in that a set of reading/writing contacts (19) electrically contacting the contacts of data cards (68) located in the reading/writing position is fastened on the bridge (14).
9. Data card unit according to claim 1, characterized
35 in that a set of reading/writing contacts (19), electrically contacting the contacts of data cards (68) located in the reading/writing position, is fastened directly on the rocker (13).

10. Data card unit according to claim 1, characterized
in that a covering (15) which can be connected to
the carrier (2) and reaches over the rocker (13) is
provided and, together with the carrier (2), forms
5 an alignment gap (18) assigned to the closing
element (56).
11. Data card unit according to claim 1, characterized
in that an alignment gap (18) assigned to the
10 closing element (57) is formed directly on the
carrier (2).
12. Data card unit according to claim 10, characterized
in that at least one resilient holding-down device
15 (16, 17), assigned to the rocker (13), is formed on
the covering (15).
13. Data card unit according to claim 1, characterized
in that at least one resilient holding-down device
20 (16, 17), assigned to the rocker (13), is formed
directly on the carrier (2).
14. Data card unit according to claim 1, characterized
in that the carrier (2) is formed essentially as a
25 flat plate with a depression (24) serving as a
guide for the data cards (68), in that means (30,
31, 32, 33, 34) for securing a drive motor (6), for
mounting (40, 41) the transporting shaft (42) and
for mounting (35, 36, 37, 38, 39) [sic] and at
30 least one connecting shaft (9) serving for the
drive connection between the drive motor (6) and
the transporting shaft (42) are formed on the
carrier (2) and in that spacing bolts (3, 4, 5) for
fastening the data card unit (1) at the
35 installation location are formed on the carrier
(2), aligned in the same direction as the securing
and mounting means.

15. Data card unit according to claim 1, characterized
in that switches (22, 23) reporting the insertion/
removal position and the reading/writing position
of a data card (68) are provided and in that the
5 switches (22, 23), the set of reading/writing
contacts (19) and the drive motor (6) are connected
by means of a flexible strip conductor (21) led out
from the data card unit (1).
- 10 16. Data card unit according to claim 1, characterized
in that the rocker (13) is formed as one part and
profiled in a u-shaped manner, in that bearing
bores (82, 83) in line with one another are
provided in the legs (80, 81) of the rocker (13)
15 and in that a closing element (76) and at least one
sensing element (78, 79) are formed on directly,
parallel to the bearing axis.